Specification

Sensor

Sensor type	CMOS Color
Shutter	Rolling shutter
Sensor characteristic	Linear
Readout mode	-
Pixel Class	5 MP
Resolution	5.04 Mpix
Resolution (h x v)	2592 x 1944 Pixel
Aspect ratio	4:3
ADC	12 bit
Color depth (camera)	8 bit
Optical sensor class	1/2.5""
Optical Size	5.702 mm x 4.277 mm
Optical sensor diagonal	7.13 mm 1/2.5"
Pixel size	2.2 µm
Manufacturer	Onsemi
Sensor Model	AR0521SR2C09SURA0
Gain (master/RGB)	15x/8x
AOI horizontal	-
AOI vertical	-
AOI image width / step width	- / -
AOI image height / step width	- / -
AOI position grid (horizontal/vertical)	- / -
Binning horizontal	-
Binning vertical	-
Binning method	-
Binning factor	-
Decimation (subsampling) horizontal	-
Decimation (subsampling) vertical	-
Decimation (subsampling) method	-
Decimation (subsampling) factor	-
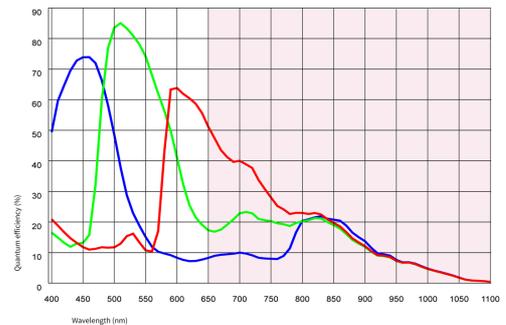
Model

Frame rate freerun mode	27 fps
Frame rate trigger (continuous)	10 fps
Frame rate trigger (maximum)	10 fps
Exposure time (minimum - maximum)	0.031 ms - 33.333 ms
Power consumption	6 W - 7 W
Image memory	600 MB

Ambient conditions

The temperature values given below refer to the outer device temperature of the camera housing.

Allowed device temperature during operation	0 °C - 55 °C / 32 °F - 131 °F
Allowed device temperature during storage	-20 °C - 60 °C / -4 °F - 140 °F
Humidity (relative, non-condensing)	20 % - 80 %

Connectors

Interface connector	GigE RJ45, screwable
I/O connector	8-pin Hirose connector (HR25-7TR-8PA(73))
Power supply	12 V - 24 V or PoE+

Pin assignment I/O connector

1	Ground (GND)
2	Flash output with optocoupler (-)
3	General Purpose I/O (GPIO) 1
4	Trigger input with optocoupler (-)
5	Flash output with optocoupler (+)
6	General Purpose I/O (GPIO) 2
7	Trigger input with optocoupler (+)
8	Input power supply (VCC) 12-24 V DC
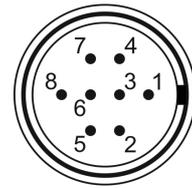
Design

Lens Mount	C-Mount
IP code	IP30
Dimensions H/W/L	34.0 mm x 44.0 mm x 73.0 mm
Mass	169.5 g
Housing material	Aluminum

Features

List of on-camera image pre-processing features.
All features of the table are available via our IDS peak software for image pre-processing on the host computer (sensor model dependent).

Image Acquisition		
	Freerun	✓
	Software trigger	✓
	Hardware trigger	-
	Trigger controlled exposure	-
	Denoiser	-
	Long exposure	-
	Line scan	-
	Global start	-

Flashing		
	Flashing	-
	PWM flashing	-

Subject to technical modifications (2026-01-28)

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IDS NXT malibu RO25050C-HQ (1008318)

Image Adjustments		
	Auto exposure	✓
	Auto gain	✓
	Auto whitebalance	✓
	Color correction	-
	Gamma	-
	LUT	-
	Mirror/flip	X/Y

On-board Image Processing		
	Pixel formats	
	Region of interest	-
	Decimation (FPGA)	-
	Decimation (Sensor)	-
	Binning (FPGA)	-

Others		
	Chunks	-
	Sequencer	-
	Firmware update	✓
	1st supported firmware version	4.0